

## ABSTRACT OF THE DISCLOSURE

In order to implement failure-proof media transmission with TCP (Transmission Control Protocol), the following elements are added to a TCP control section, that is, a known transmission processing system: a band estimation section for estimating an available transmission band in a communication path between a transmitting terminal and a receiving terminal, a band management section for setting an upper limit of a band to be used by each TCP session by allocating the available transmission band to each of TCP sessions between the transmitting terminal and the receiving terminal, and a transmission rate management section for limiting a data transmission rate associated with each TCP session according to the preset upper limit of the band to be used.